

WHAT IS CLAIMED IS:

1. A flat panel monitor for displaying information originated by a host computer, said flat panel monitor comprising:

5 a graphics controller operable to receive a gamma correction control signal, the graphics controller operable to adjust a gamma value of a liquid crystal display screen displaying a representation of image data in response to the gamma correction control signal, the  
10 graphics controller operable to adjust the gamma value without substantially affecting a grayscale resolution of the liquid crystal display screen.

15 2. The flat panel monitor of Claim 1, wherein the graphics controller includes a color look up table to match a gamma response for the liquid crystal display screen, the graphics controller operable to adjust the gamma response of the color look up table in response to the gamma correction control signal.

20 3. The flat panel monitor of Claim 1, wherein the graphics controller is operable to generate color values in response to receipt of the image data and the gamma correction control signal.

25 4. The flat panel monitor of Claim 3, further comprising:

30 a frame rate modulator operable to generate an intermediate grayscale value for the liquid crystal display screen in response to the color values generated by the graphics controller.

5. The flat panel monitor of Claim 3, further comprising:

5 frame rate controller operable to receive a synchronization signal from the graphics controller, the frame rate controller operable to control modulation performed by the frame rate modulator in response to the synchronization signal.

10 6. The flat panel monitor of Claim 5, wherein the synchronization signal includes horizontal synchronization and vertical synchronization values.

15 7. The flat panel monitor of Claim 1, further comprising:

15 a controller circuit operable to receive a white balance adjustment control signal, the controller circuit operable to adjust a white balance of the liquid crystal display screen in response to the white balance control signal.

20 8. The flat panel monitor of Claim 7, wherein the controller circuit adjusts the white balance of the liquid crystal display screen without substantially affecting a grayscale resolution of the liquid crystal display screen.

25 9. The flat panel monitor of Claim 1, wherein the graphics controller is operable to provide a backlight control signal to control a backlight of the flat panel monitor.

10. The flat panel monitor of Claim 1, wherein the gamma correction control signal is generated in response to a comparison of optical characteristics of the liquid crystal display screen and reference optical characteristics.

11. A method for displaying information on a flat panel monitor, comprising:

receiving a gamma correction control signal;  
10 adjusting a gamma value for a liquid crystal display screen in response to the gamma correction control signal, the gamma value being adjusted without substantially affecting a grayscale resolution of the liquid crystal display screen

15 12. The method of Claim 11, further comprising:  
comparing optical characteristics of the liquid crystal display screen to reference optical characteristics;

20 generating the gamma correction control signal in response to the comparison.

25 13. The method of Claim 11, further comprising:  
generating color values in response to receipt of image data and the gamma correction control signal.

30 14. The method of Claim 13, further comprising:  
generating an intermediate grayscale value for the liquid crystal display screen in response to the color values.

15. The method of Claim 11, further comprising:  
adjusting a white balance of the liquid crystal  
display screen without substantially affecting a  
grayscale resolution of the liquid crystal display  
screen.

5           16. A method for providing image data to a flat  
panel monitor, comprising:

10           generating an uncorrected color value in response to  
receipt of image data;

translating an uncorrected color value to a  
corrected color value according to an actual gamma  
response for a liquid crystal display screen;

15           displaying the image data with the corrected color  
value without substantially affecting a grayscale  
resolution of the liquid crystal display screen.

17. The method of Claim 16, further comprising:

20           determining grayscale ramps for the liquid crystal  
display screen;

determining the actual gamma response for the liquid  
crystal display screen from the grayscale ramps.

18. The method of Claim 16, further comprising:

25           comparing the gamma response for the liquid crystal  
display screen to a reference gamma response;

generating a transfer function to map the reference  
gamma response to the actual gamma response.

30           19. The method of Claim 16, further comprising:

maintaining the gamma response for the liquid  
crystal display screen in a look up table.

20. The method of Claim 16, further comprising:  
modulating the corrected color value to produce an  
intermediate grayscale value.